

FIGURE 1

bitterbush [SIN_2]	MEEPK-----	KHISQADLAHKQPGDLWISIKGKVYDISKW
soybean [SIN_8]	M-----EVVEKEK-----	KYITSEELKGHNKEGDLWISIQGKVYNVSDW
borage [gi_2062403]	MA-----A-----	KYITSDELKNHDKPGDLWISIQGKAYDVS DW
corn [SIN_4]	MP-----	PSVDAMPAGPDAAGAGDVRMISSKELRAHASADDLWISISGDVYDVT PW
wheat [SIN_10]	MARTGLADATAPADEAMPAASK--	DAADV RMISTKELQAHAAADDLWISISGDVYDVT PW
wheat [gi_4104056]	MARTGLADATAPADEAMPAASK--	DAADV RMISTKELQAHAAADDLWISISGDVYDVT PW
soybean [SIN_6]	LP-----A-----	
sunflower [gi_1040729]	MV-----SPSIEVLNSIADGK-----	KYITSKELKKHNNPNDLWISILGKVYNVTEW
bitterbush [SIN_2]	TKEHPGGELPLLSFAGQDVTDAFIAYHPPGTAWOYLDRFFTGYVQDYSVSEMSK DYRRLV	
soybean [SIN_8]	VKEHPGGDVPISNLAGQDVTDAFIAYHPPGTAWSHLEKEFTGYHLSDFKVSEVSKDYRKLA	
borage [gi_2062403]	VKDHPGGSFPLKSIAGOEVTDVFVAEHPASTWKNLDKFFTGYYLKDYSVSEVSKDYRKLV	
corn [SIN_4]	LPHHPGGDLPLLTLAGQDATDAFAAYHPPSARPLLRFFVG-RLSDYAVSPASADYRLL	
wheat [SIN_10]	LRHHPGGEVPLITLAGQDATDAFMAYHPPSVRPLLRFFVG-RLSDTVP PASADFRLL	
wheat [gi_4104056]	LRHHPGGEVPLITLAGQDATDAFMAYHPPSVRPLLRFFVG-RLTDYTVP PASADFRLL	
soybean [SIN_6]	FSTSHRLSDHTVSAAASSDYRKLF	
sunflower [gi_1040729]	AKEHPGGDAPLINLAGQDVTDAFIAFHPPGTAWKHLDKLFTGYHLKD YQVS DISRDYRKLA	
bitterbush [SIN_2]	SEFSKMGLEKTPGKGVYCSIFFVSVLFA LSVGVLYCKSTWAHLCSGLLMGMLWLQSGWV	
soybean [SIN_8]	SEFSKLGLFDTKGHVTSTCLASVAVMFLIVLYGVLRCTSVAHLSGMLLGLLWMOSAYV	
borage [gi_2062403]	EEFSKMGLYDKKGHIMFATLCFIAMLFAMSVYGVLFCEGVLVHLFGCLM GFLWIQS GWI	
corn [SIN_4]	AQLSSAGLFERVGHTPKFLLVAMSVLFCIALYCVLACSTS TGAHM FAGGLIGF IWIQS GWI	
wheat [SIN_10]	AQLSSAGLFERVGHTPKFLLVAMSVLFCIALYCVLACSTS TGAHM FAGGLIGF IWIQS GWI	
wheat [gi_4104056]	AQLSSAGLFERVGHTPKFLLVAMSVLFCIALYCVLACSTS TGAHM FAGGLIGF IWIQS GWI	
soybean [SIN_6]	SDLSALNLFNRKGHTTSILLSLITLFP LSVCGVLFSDSTFVHVLSA ALIGFLWIQS GWI	
sunflower [gi_1040729]	SEFAKAGMFEKKGHGVIYSLCFVSLLLSACVYGVLYSGSF WIHMLS GAILGLA WMQIAYL	

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 soybean [SIN_6]
 sunflower [gi_1040729]

GHDSCHYQVMNRKLNRLFQLIAGNVIAGVSVAWWKLDHNTHHFACNSANLDPPDIQHLPI
 GHDSGHYVUMTTNGFNKAQILSGNCNLTGISIAWWKWTNAHIIACNSLDDHDPPDLQHMPV
 GHDAUGHYMWVSDSRNLKFMGIFAANCLSGISIGWWKWNHNAHHIACNSLEYDPPDLQYIPF
 GHDSGHHRITGHPVLDRVQVLSGNCNLTGSIACNSLDDHDPPDLQHMPPL
 GHDSGHHQITRHPALNRLLQVVGNNCLTGLGIAWWKENHNTHHISCNSSLDDHDPPDLQHLPPL
 GHDSGHHQITRHPALNRLLQVVGNNCLTGLGIAWWKENHNTHHISCNSSLDDHDPPDLQHLPPL
 GHDSGHYNVMLSRRRNRAIQILSGNIALAGISIGWWKWNHNAHHIACNSLDYDPPDLQHMPV
 GHDAGHYQMMATRGWNKFGAGIFIGNCITGISIAWWKWTNAHIIACNSLDYDPPDLQHLPML

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IAISPKEFNSLTSYYHNCKMTYDRAARFFVFSQHQHTEYPALLSVRVLFLISFKVVVFNN
 FAVSSRFENSITSFHFYGRKLEFDIARFLICYQHFTFYPVMCVARVNLYLQTILLFCSR-
 LVVSSKFEGLTSHSFYEKRLTEDLSRFFTSYQHWTFYPVMCIARINLAQSALFVLTE-
 FAVSPKLEGNIWSYFYQRTLAFDAASKFFISYQHWTFYPVMCIARINLAQSALFVLTE-
 FAVSTKLFFNLWSVCYERTLAFDAISKFFVSYQHWTFYPVMGFAVINLLVQSIVFLITQ-
 FAVSTKLFFNLWSVCYERTLAFDAISKFFVSYQHWTFYPVMGFAVINLLVQSIVFLITQ-
 FAVSSRFENSITSFHXYGRKXEFDXIAXFPLICYQHFTFYPVMCVARVNLYLQTILLFCSR-
 LAVSSKLFNSITSVYGRQLTFDPLARFFVSYQHLYYPIMCVARVNLYLQTILLISK-

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KRYVKRSQEILGYAAFLLTWYLLSRLPNPERVMYFTSCLAVAGFOHQWQFSLNHFASNV
 RKVQDRALNIMGILFWFPLVSLPNSVTGMQQVQFCLNHFANVR
 RNVSYRAHELLGCLVESIWYPLVSCLPNWGERIMEVIASLSFV
 KRPVQRLLIEIAGVATEFWAWYPLLVASILPNWWERVAFV
 KKVRQRWLEIAGVAAFWWYPLVSCLPNWWERVAFV
 KKVRQRWLEIAGVAAFWWYPLVSCLPNWWERVAFV
 XKVQDRALNIMGILFWFPLFLLA-----LLFV-----PIQHQFWLNHLAENL
 RKIPDRGLNLIGTLIFFWTFPLVSLPNSFCVTFGQIQTLNHFSGDV

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YTGLPSGNDFHQQTGTLNITASAWWDWFHGGLHFQIEHHLFPRMPKCHFRKISPIVNK
 YVGPPSGNDWFEEKQTSGLDISCASSMDWEFGGLQFQLEHHLFPRLPRCQLRKISPLVSD
 YVGPKGNMWEEKQTDGTLDISCPWMDWFHGGLQFQIEHHLFPKMPCRNLRKISPYVIE
 YVGPPKGNDWFEEKQTAGTLDILCSPWMDFHGGLQFQIEHHLFPRLPRCHLRKVAPAVRD
 YVGPPKGNDWFEEFRQTAGTLDIKCSPWMDFHGGLQFQVEHHLFPRLPRCHYRMVAPIVRD
 YVGPPKGNDWFEEFRQTAGTLDIKCSPWMDFHGGLQFOVEHHLFPRLPRCHYRMVAPIVRD
 YVGPPKGDNWEEKQTRGTIDIACSSWMDWFEGGLQFQLEHHLFPRLPRCHLRSISPICRE

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LCQKHNLSYETATMWEANKMVYSTLRAVAMEAKDVTK-PVPKNMVWEAMNTFG
 LCKKKHNLPYRSLSEWEANOWMTIRTLRTAALQARDLTN-PAPKNLWEAVNTHG
 LCKKKHNLPYNAFSKANEMTLRLRNTALQARDLTK-PLPKNLVWEALHTHG
 LCKKHGLTYSAAATEGANVLTWKTLRAAALQARTATSGGAPKNLWEAVNTHG
 LCKKHGLTYSGAATEWEANVMTWKTLLRAAALQAREATTGAAPKNLWEALNTHG
 LCKKHGLTYSGAATEWEANVMTWKTLLRAAALQAREATTGAAPKNLWEALNTHG
 LCKKYNLPYVSLSFYDANVTLKTLLRTAALQARDLTN-PAPONLWEAFNTHG